

Work Order ID 83671

April-23-12 11:16:05 AM

83671

Page 1

Item ID: D2574

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Saddle, Aft In 205

Start Date: 23/04/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 11/05/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/23

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2574	Rev E								

100

100

HAAS I

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

Program Batch No. 83671 Double check by: BA 1-Machine Step
No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine
Step No 2 per Folio FA051 and inspect per attached Dimension Sheets 3-
Machine Step No 3 per Folio FA051 and insp

0.00

0.00

0.00

0.00

0.00

0.00

BA 12/05/02

BA 12/05/05

BA 12/05/05
BA 12/05/04

12

0

12

0

12

0

110

110

Mill Conv

Conventional Milling Machine

CONVENTIONAL MILLING MACHINE

Memo

Machine keyway as per dwg D2573 & D2574

120

120

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83671

April-23-12 11:16:05 AM

83671

Page 2

Item ID: D2574

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Saddle, Aft In 205

Start Date: 23/04/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 11/05/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

SL 12/5/8

12

0

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

12

12/5/8

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

150

Powdercoat

Memo

0.00

Powder Coating

START TIME:

FINISH TIME:

OVEN TEMPERATURE:

1:10

3200F

1540

12x

MF 12/5/08

M/21134

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83671

April-23-12 11:16:05 AM

83671

Page 3

Item ID: D2574

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Saddle, Aft In 205

Stop

NS2

Start Date: 23/04/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 11/05/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.00							
Quality Control									
170	Identify as per dwg & Stock Location: <u>ST</u>	0.00							
170									
Packaging	Memo	0.00							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									

12 4 BR 12-58

14/4/9 (12)

12/5/9

MW 12/05/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-23-12 11:16:08 AM

Page 1

Work Order ID: 83671

83671

Parent Item: D2574

D2574

Parent Item Name: Saddle, Aft In 205

Start Date: 23/04/2012

Required Date: 11/05/2012

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev: I As Per RevE 06-01-27 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-005		Manufactured	No			110	Each	49.0000	1	12			
D6101-005									**				
Saddle Billet													

H.e 12/05/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT041	2	
76838	2	
MAT044	47	
79874	19	
→81973	28	

12.0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	83671
Description: Saddle, Aft Inboard		Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		.442	.442	.442	.443		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		.500	.500	.500	.500		
G	0.257	0.262		.259	.259	.259	.259		
H	0.375	0.380		.377	.377	.377	.377		
I	0.490	0.510		.500	.497	.498	.499		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.566	.566	.566	.567		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.126	.125	.125	.125		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.248	.250	.250	.251		
S	0.115	0.135		.127	.126	.126	.127		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.228	3.228	3.228	3.228		
V	0.230	0.250		.236	.240	.239	.240		
W	0.115	0.135		.122	.123	.122	.122		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.760	0.760	0.760	0.760		
Z	0.352	0.372		.365	.366	.364	.367		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.624	.625	.624	.622		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.243	.245	.245	.247		
AE	1.500	1.520		1.5127	1.5133	1.5135	1.511		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.280	.280	.280	.280		
AH	0.240	0.260		.244	.246	.246	.248		
AI	2.000	2.020		2.0025	2.003	2.004	2.003		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by:	amx
Date:	12/05/03

Audited by:	SA
Date:	2/5/8

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	03671
Description: Saddle, Aft Inboard		Part Number:	D2574
Inspection Dwg: D2574 Rev. E		Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				15	16	17	18		
A	0.438	0.443		0.441	0.441	0.441	0.441		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		0.501	0.502	0.500	0.501		
G	0.257	0.262		.259	.259	.259	.259		
H	0.375	0.380		.377	.377	.377	.377		
I	0.490	0.510		.499	.498	0.499	0.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.566	.566	0.568	0.569		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		.125	.128	.125	.125		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.250	.251	0.252	0.251		
S	0.115	0.135		.127	.127	0.127	0.128		
T	0.178	0.198		.188	.188	.188	.188		
U	3.210	3.250		3.228	3.228	3.228	3.228		
V	0.230	0.250		.241	.242	0.240	0.240		
W	0.115	0.135		0.125	0.126	0.126	0.125		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.760	0.760	0.760	0.760		
Z	0.352	0.372		0.368	0.369	0.368	0.368		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		0.625	0.625	0.625	0.625		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.247	.247	0.241	0.242		
AE	1.500	1.520		1.511	1.512	1.511	1.512		
AF	0.115	0.135		.135	.135	0.135	0.135		
AG	0.240	0.280		.280	.280	0.280	0.280		
AH	0.240	0.260		.249	.247	0.249	0.250		
AI	2.000	2.020		2.002	2.001	2.0005	2.0012		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by:	AK
Date:	12/05/04 / 12/05/05

Audited by:	AK
Date:	12/1/18

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

DART AEROSPACE LTD	Work Order: 83671
Description: Saddle, Aft Inboard	Part Number: D2574
Inspection Dwg: D2574 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2574 Rev. E and record below:

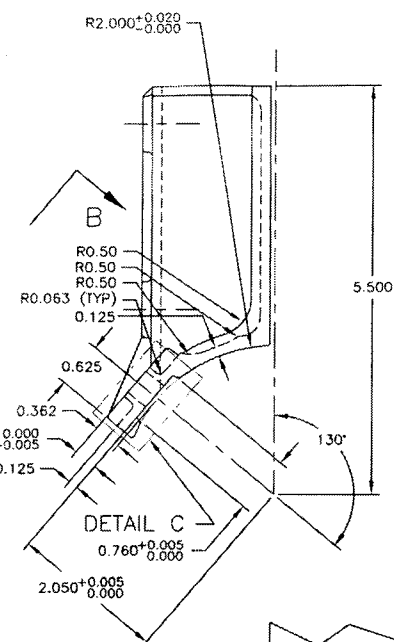
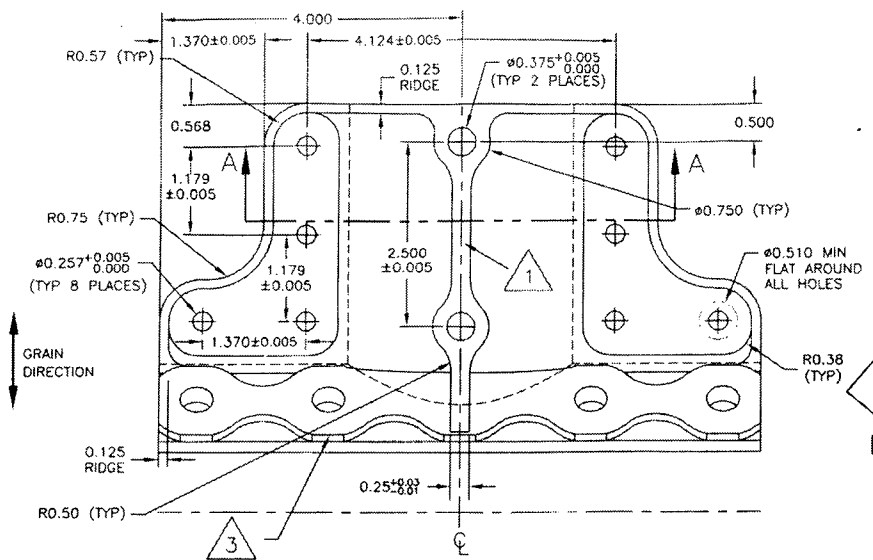
				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	19	210	211	212	By	Date
A	0.438	0.443		0.441	0.441	0.441	0.441		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		0.501	0.500	0.502	0.501		
G	0.257	0.262		0.259	0.259	0.259	0.259		
H	0.375	0.380		0.377	0.377	0.377	0.377		
I	0.490	0.510		0.500	0.500	0.500	0.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		0.568	0.568	0.568	0.568		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.365	1.375		1.370	1.370	1.370	1.370		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	4.119	4.129		4.124	4.124	4.124	4.124		
P	0.115	0.135		0.126	0.125	0.125	0.125		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.252	0.252	0.252	0.252		
S	0.115	0.135		0.126	0.127	0.126	0.126		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	3.210	3.250		3.230	3.230	3.230	3.230		
V	0.230	0.250		0.238	0.238	0.238	0.238		
W	0.115	0.135		0.122	0.122	0.123	0.122		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.760	0.760	0.760	0.760		
Z	0.352	0.372		0.368	0.369	0.369	0.369		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.625	0.625	0.625	0.625		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.240	0.242	0.242	0.242		
AE	1.500	1.520		1.513	1.512	1.5105	1.512		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.280	0.280	0.280	0.280		
AH	0.240	0.260		0.250	0.250	0.250	0.250		
AI	2.000	2.020		2.0027	2.002	2.000	2.0015		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by: H.A
Date: 12/05/05

Audited by: SA
Date: 12/5/08

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.27	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

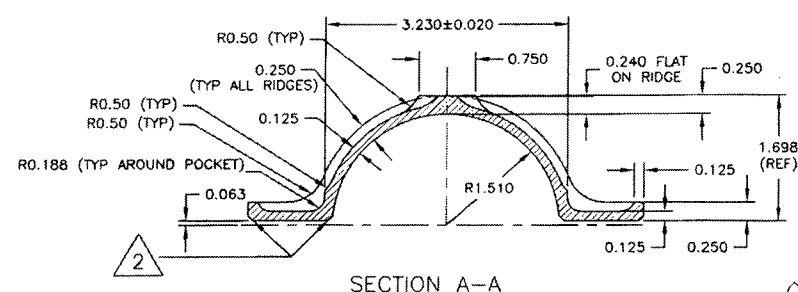
RELEASED
05.12.06



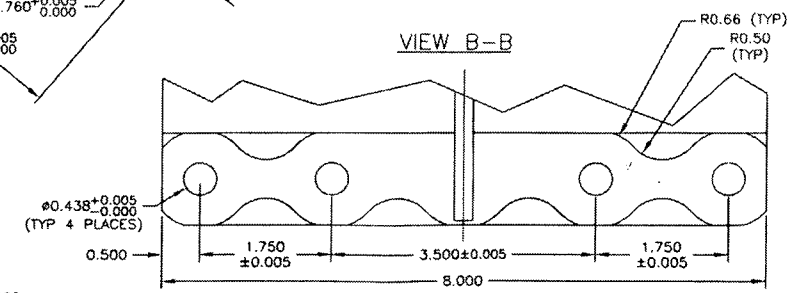
NOTES

MATERIAL: 7075-T7351 (00-A-250/12)
(REF DART SPEC. D6102-003)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 01B UNLESS OTHERWISE NOTED

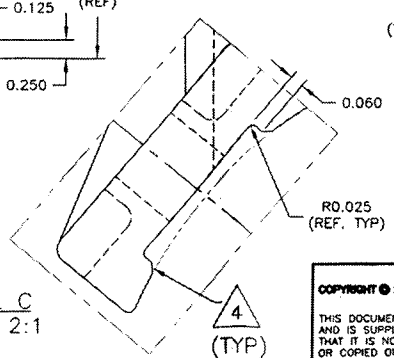
- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
- 2 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
- 3 CHAMFER 0.063 x 45° ALL AROUND
- 4 CHAMFER 0.033 x 45° (SEE DETAIL C)



SECTION A-A



VIEW B-B



DETAIL C
SCALE 2:1

E	05.07.13	ADD CHAMFER ON RIDGE NOTE 4
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCOMP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE
DESIGN	DS	DRAWN BY PH
CHECKED	✓	APPROVED
DATE	05.07.13	TITLE INNER AFT SADDLE
		DART AEROSPACE LTD. WILLOWDALE, ONTARIO, CANADA
		DRAWING NO. D2574
		REV. E SHEET 1 OF 1
		SCALE 2:3

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UNCLASSIFIED COPY
SUBMIT
WORK ORDER
NO 83671 MLCJ
12/04/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries